

(12) **United States Patent**
Jain et al.

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(54) **CONTROLLING A COMPUTING DEVICE
BASED ON USER MOVEMENT ABOUT
VARIOUS ANGULAR RANGES**

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(57) **ABSTRACT**

A computing device can be controlled based on changes in the angle of a user's head with respect to the device, such as due to the user tilting the device and/or the user tilting his head with respect to the device. Such control based on the angle of the user's head can be achieved even when the user is operating the device "off-axis" or when the device is not orthogonal and/or not centered with respect to the user. This can be accomplished by using an elastic reference point that dynamically adjusts to a detected angle of the user's head with respect to the device. Such an approach can account for differences between when the user is changing his natural resting position and/or the resting position of the device and when the user is intending to perform a gesture based on the angle of the user's head relative to the device.

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CPC **G06F 3/012** (2013.01)

(58) **Field of Classification Search**
None

See application file for complete search history.

20 Claims, 9 Drawing Sheets

